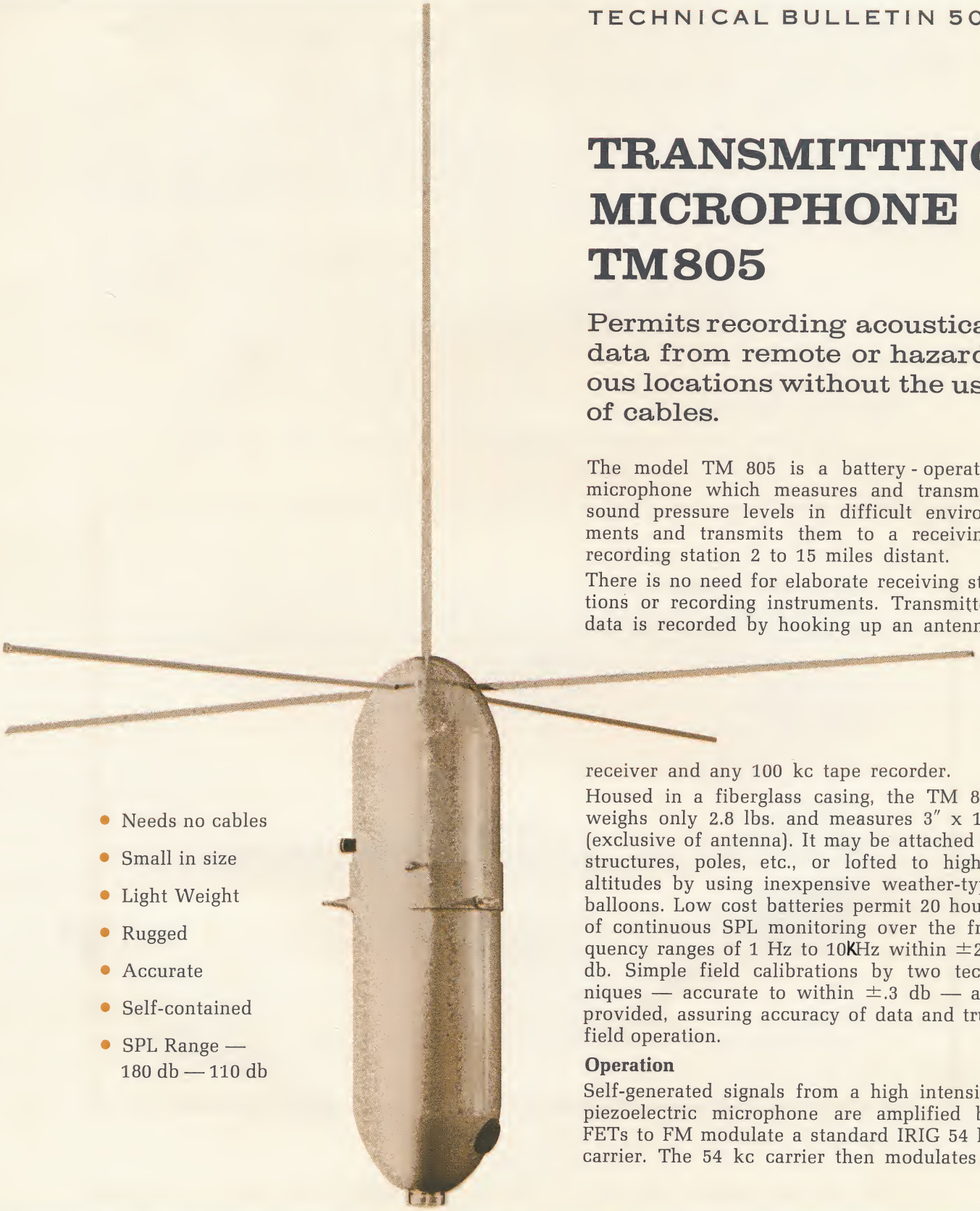
DATACRAFT, INC.

TECHNICAL BULLETIN 502

TRANSMITTING MICROPHONE TM805

Permits recording acoustical data from remote or hazardous locations without the use of cables.



- Needs no cables
- Small in size
- Light Weight
- Rugged
- Accurate
- Self-contained
- SPL Range — 180 db — 110 db

The model TM 805 is a battery - operated microphone which measures and transmits sound pressure levels in difficult environments and transmits them to a receiving-recording station 2 to 15 miles distant.

There is no need for elaborate receiving stations or recording instruments. Transmitted data is recorded by hooking up an antenna, receiver and any 100 kc tape recorder.

Housed in a fiberglass casing, the TM 805 weighs only 2.8 lbs. and measures 3″ x 12″ (exclusive of antenna). It may be attached to structures, poles, etc., or lofted to higher altitudes by using inexpensive weather-type balloons. Low cost batteries permit 20 hours of continuous SPL monitoring over the frequency ranges of 1 Hz to 10KHz within ±2.5 db. Simple field calibrations by two techniques — accurate to within ±.3 db — are provided, assuring accuracy of data and true field operation.

Operation

Self-generated signals from a high intensity piezoelectric microphone are amplified by FETs to FM modulate a standard IRIG 54 kc carrier. The 54 kc carrier then modulates a

one-quarter watt FM transmitter which is crystal controlled in the IRIG 215-260 MHZ telemetry band.

The received signal, being SPL data on a standard 54 kc carrier, may then be direct recorded at a standard tape speed of 60 ips. Playback of the data can be accomplished by using standard FM tape recorder electronics. The advantages of using a standard IRIG 54 kc carrier are increased accuracy, dynamic range, and availability of reproduce equipment.

Application

Datacraft's TM 805 Microphone was designed for maximum ease in recording received data and is available in custom units utilizing a wide variety of sizes, weights, transmitting distances, etc.

Especially useful for continuous acoustic survey in remote or hazardous areas, the TM 805 Microphone also lends itself to sound level measurement of large rocket motor environments, acoustic test chambers, sonic booms, in airport noise surveys, and similar applications.

Simplicity of operation enables the TM 805 to be used by inexperienced personnel. The TM 805 Microphone has been thoroughly proven and field tested.

Write or call our Systems Engineering Department for information and quotations on custom units or complete transmitting-receiving-recording systems.

SPECIFICATIONS

Transmitting Distance:	2-15 Miles depending on receiving station
Received Signal:	FM modulated IRIG carrier
Transmitter:	250 mw max (vert. polarized) 215 MHz to 260 MHz
Spurious Radiation:	—50 db
SPL Range:	determined by microphone — 110 to 180 db
SPL Incidence:	half spherical within .5 db
Sensitivity Full Scale:	120 db
Dynamic Range:	40 db
Frequency Response:	1 Hz to 10k Hz ±2.5 db
Linearity:	± 1 db
Temperature:	20° to 125° F.
Sensitivity to Acceleration:	determined by microphone — 1 grms less than 90 db SPL
Battery Operation:	4 Mallory TR 289 required
Battery Life:	20 hours continuous operation
Calibration:	by insertion method built in and dynamic acoustic calibrator
Size:	3 inch diameter by 12" long (not incl. antenna)
Weight:	2.8 lbs. with batteries
Static Pressure:	30 psia max. determined by mike

DATACRAFT, INC.

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Representatives:

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YOU RECENTLY INQUIRED...

AND WE ARE HAPPY TO PROVIDE...

THE LATEST INFORMATION ON DATACRAFT'S

NEW TM 805 TRANSMITTING MICROPHONE.

TM 805 prices are as follows and are quoted FOB Datacraft, Inc., Gardena, California:

1 - 5 units	$3,850/each
6 - 10 units	$3,460/each
11 - 15 units	$3,110/each

Delivery would be 90 days from receipt of order.

We appreciate your interest in our product. Should you require additional information or quotations on a specific requirement, do not hesitate to contact Mr. Paul Votava in our Systems Engineering Department.

Sincerely,

Glen Richardson

Glen Richardson
Director of Marketing

GR:cjc